

WHAT IS CLAIMED IS:

1. A vibrating motor comprising:

a field magnet having 6 magnetic poles such that S and N magnetic poles are alternately magnetized in a circumference direction;

a rotating shaft;

an armature core having three salient poles consisting of a central salient pole and a pair of auxiliary salient poles which are spaced apart from said central salient pole on either side, said three salient poles being shifted and arranged around said rotating shaft with non-centrosymmetry a coil being wound on each of said three salient poles;

wherein;

a facing gap between said central salient pole and said field magnet is formed narrower than facing gaps between said auxiliary salient poles and said field magnet;

an exciting force of said central salient pole is greater than that of said auxiliary salient poles; and

in starting, the same magnetic pole as the magnetic pole of said field magnet generates in a facing surface of said central salient pole and a repulsive force occurs so that said armature core is urged to rotate.

2. A vibration motor according to claim 1, wherein said facing surface of said central salient pole which is facing to said field magnet is formed approximately arc-shaped; and

each facing gap length on either side in a circumferential direction of said central salient pole is different.

3. A vibration motor according to claim 1, wherein width of rib of said central salient pole is formed greater than that of auxiliary salient poles, said coil being wound on said rib.

4. A vibration motor according to claim 1, wherein a number of turns of said coil which is wound on said central salient pole is bigger than that of said coil which is wound on each of said auxiliary salient poles to make an exciting force be large.

5. A vibration motor according to claim 1, wherein a locus circle which is made by facing surfaces between said field magnet and said three salient poles is formed in an approximately oval; and

    a center of said field magnet and a center of said locus circle approximately correspond with said rotating shaft.

6. A vibration motor according to claim 1, wherein a locus circle which is made by facing surfaces between said field magnet and said three salient poles is formed smaller than inside diameter of said field magnet,

    a center of said field magnet almost correspond with said rotating shaft; and

    a center of said locus circle shifts toward said central salient pole from said rotating shaft.